Configuration Instructions

EV Charger

AC7000-AE-35

AC011K-AE-35

V0

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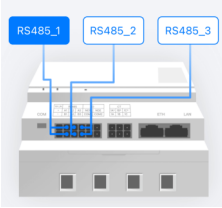
Preparations

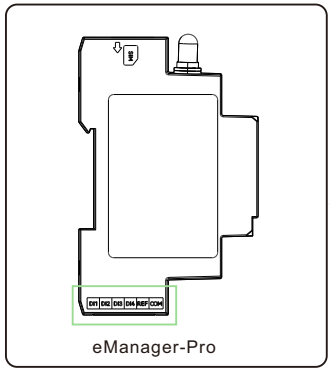
Connect to the EMS

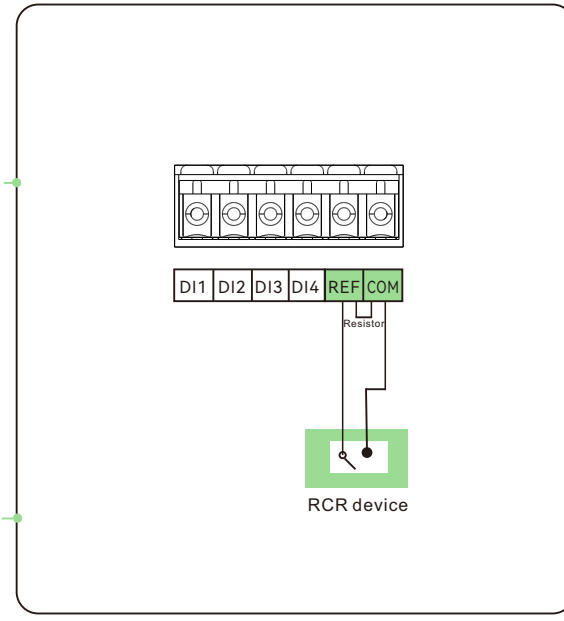
Connect communication cables of the electric vehicle (EV) charger to any available RS485 port pair on SAJ eManager.
For example: RS485 A1 and B1

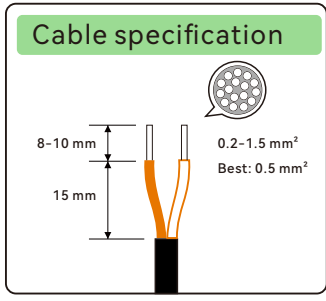


Connect the RCR device to the EMS (For German)

In Germany, to comply with § 14a of the Energy Industry Act (EnWG), connect a ripple control receiver (RCR) and a 15 kΩ resistor to the REF and COM terminals on SAJ eManager-Pro. Upon receiving an overload signal from the grid, the RCR device will notify the EV charger to downgrade the power to 4.2 kW.







1. Download the App

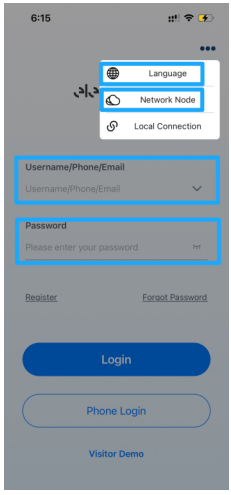
Scan the QR code to download and install the Elekeeper App.

Note: The configuration operations on the Elekeeper App might vary, depending on the App version.

2. Log in to the App

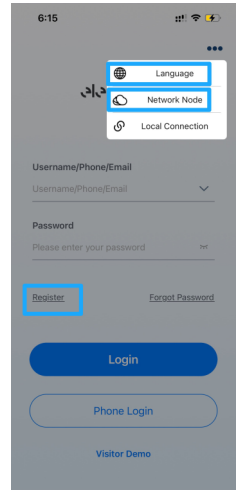
Have an account?

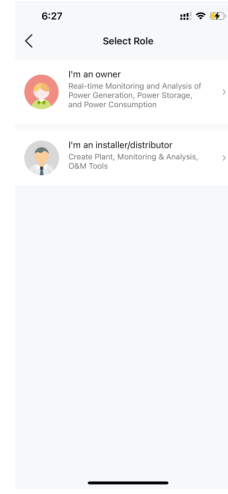
1. Tap the three-dot icon on the top right corner. Choose the language and network node based on your actual conditions.
2. Use your account and password for login.



No account?

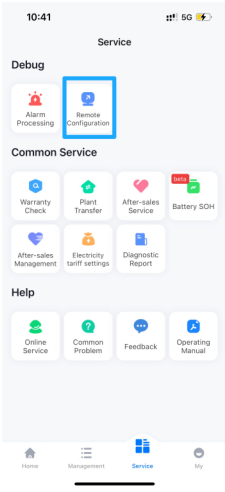
1. Tap the three-dot icon ••• on the top right corner. Choose the language and network node based on your actual conditions.
2. Tap **Register**. Choose whether you are an owner, installer, or distributor.
3. Follow the instructions on the screen to set the user name, country/region, time zone, E-mail, and password.
4. Use the account and password for login.

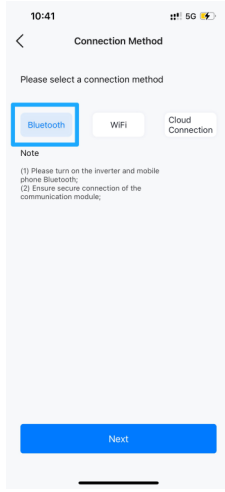


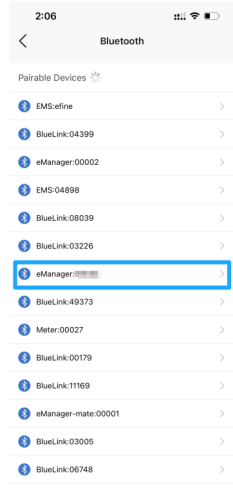


3. Add the EV charger

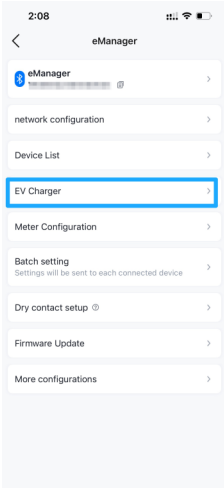
1. Choose **Service** > **Remote Configuration**. Then, select **Bluetooth**.
2. Select **eManager:**xxxxx according to the last five digits of SAJ eManager serial number (SN).

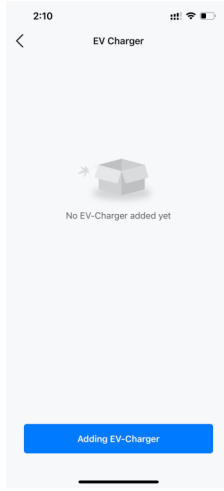


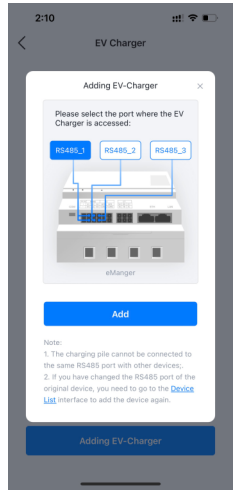




3. On the eManager home page, tap **EV Charger**.
4. Add the required EV charger by tapping the RS485 ports connecting the EV charger. For example:



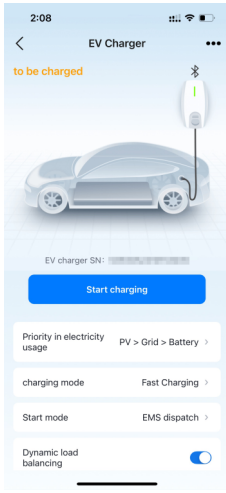


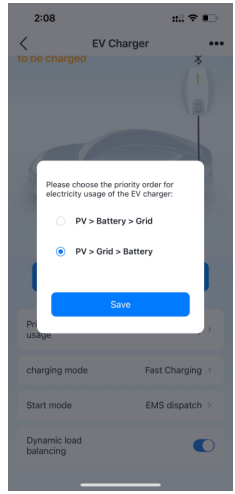


4. Set the EV charger

4.1 Set the charging priority

Tap **Priority in electricity usage**. Then, select the working mode.

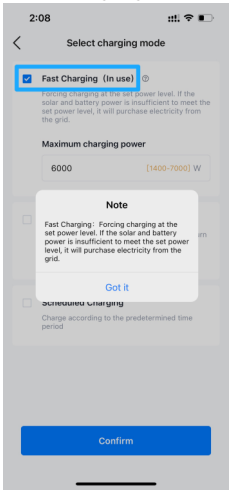




4.2 Set the charging mode

The minimum charging power required by the on-board charger (OBC) is 1.4 kW for single-phase charging and 4.2 kW for three-phase charging.
When the power is between 1.4 kW and 4.2 kW, the three-phase charger AC011K-AE-35 will work in single-phase charging mode.
Select the charging mode based on your actual needs.
To view the details about each working mode, tap the question mark ⓘ adjacent to the mode.

Fast charging mode



After charging starts, the EV charger uses the power from PV arrays, batteries, and grid according to the priorities set in section 4.1.

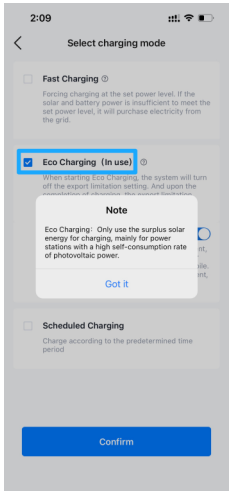
Note: If the value of **Maximum charging power** is inconsistent with that of the vehicle OBC, charging is performed according to the lower value of the two.

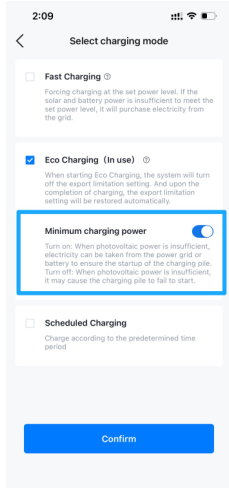
ECO charging mode

This charging mode is an economic and carbon-free charging manner. The power generated by PV arrays (solar energy) will be used by home loads and batteries first and the remained power will be used by the EV charger.

When the remained solar power is lower than the minimum charging power 1.4 kW:

- If **Minimum charging power** is disabled: EV charging will stop.
- If **Minimum charging power** is enabled: The grid or battery energy will be used as supplementary energy sources to ensure charging continues.

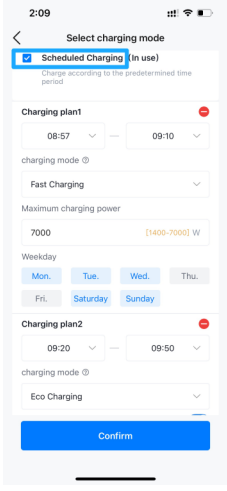


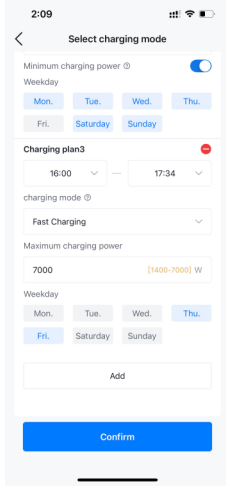


Scheduled charging mode

You can set the fast and ECO charging modes for different periods flexibly.

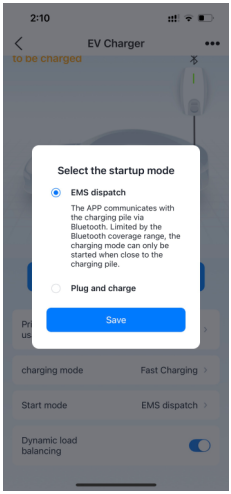
After a charging plan is set, charging will start and end automatically in the specified charging start and end time.





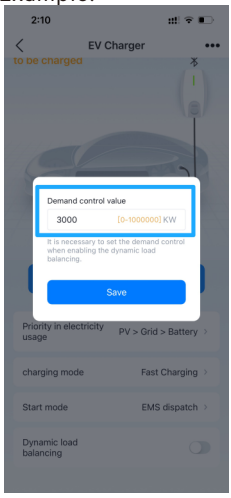
4.3 Set the startup mode

EMS dispatch: Recommended mode. In this mode, SAJ eManager collects running data from the EV charger and controls its charging manner.
Plug and charge: In this mode, SAJ eManager will not control the EV charger and the charging settings will not take effect. Charging will start or stop automatically once the EV charger cable is connected to or disconnected from the vehicle.



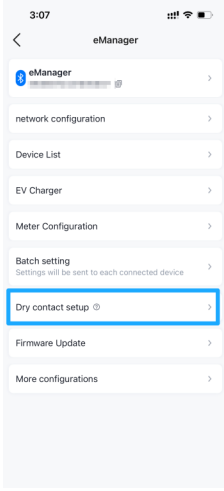
4.4 Set the dynamic load balancing function

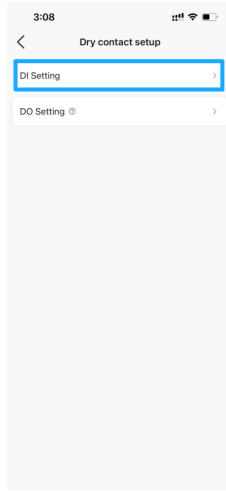
When this function is enabled, SAJ eManager will monitor whether the total grid power imported to the RESS exceeds the configured **Demand control value**. If yes, eMnanger will downgrade the charging power of the EV charger to ensure that the total grid power does not exceed the value.
Note: Per your needs, set **Demand control value** to the maximum power that you want to import from the grid.
Example:

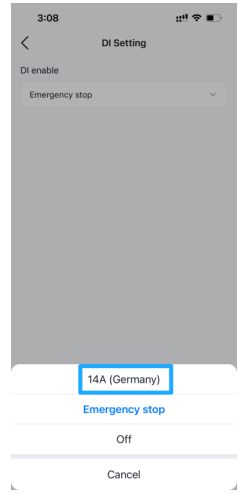


5. Set the RCR for 14a compliance (For Germany)

1. On the EMS device page, choose **Dry contact setup** > **DI Setting**.
2. Select **14A (Germany)**. Tap **Save**.

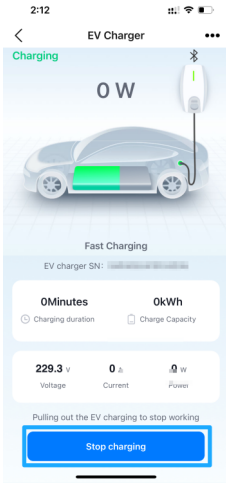


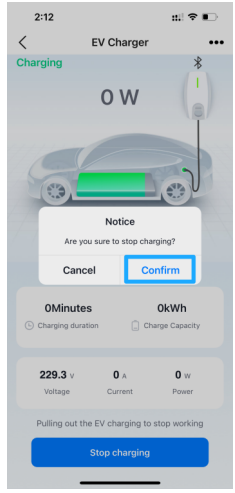


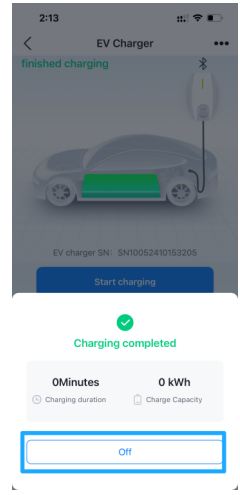


6. Start charging

If you need to start charging immediately, tap **Start charging** on the EV charger home page.

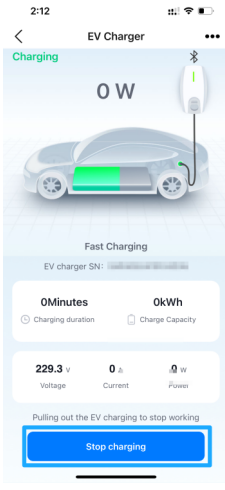


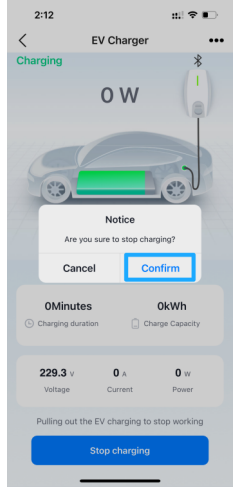


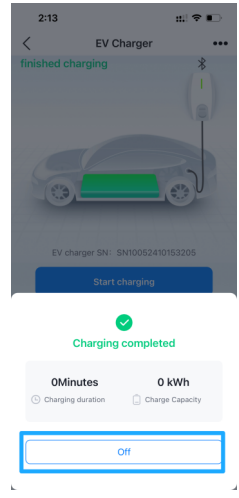


7. Stop charging

If you need to stop charging immediately, tap **Stop charging** on the EV charger home page.







8. Disconnect the EV charger

If you need to disconnect the EV charger from the current RESS, perform as follows:
1. Tap the three-dot icon ••• on the upper right corner.
2. Tap **Delete** to remove the EV charger.